

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1 - 18 (Cancelled)

19. (Previously presented) A coolant system for a machining center having a cutting tool selectively engageable with a work-piece, the coolant system comprising:

a pump for supplying a flow of coolant to the cutting tool;

a motor drivingly engaging said pump;

a pressure transducer measuring the pressure of said coolant being supplied to the cutting tool, said pressure transducer outputting an electrical pressure signal;

an accumulator plumbed between said pump and said pressure transducer to attenuate pump and motor noise from said pressure signal; and

a controller in communication with said pressure transducer and said motor, said controller comparing said pressure signal to a predetermined target pressure and varying the speed of said motor to minimize deviation of said pressure signal from said target pressure.

20. (Previously presented) The coolant system of claim 19 wherein said pump is a fixed displacement pump having a screw drive mechanism for displacing coolant.

21. (Previously presented) The coolant system of claim 19 wherein said motor is controlled by an alternating current variable frequency drive.

22. (Previously presented) The coolant system of claim 19 wherein said controller determines the speed of said motor by using a proportional, integral, derivative closed-loop control system.

23. (Previously presented) A method of controlling coolant flow comprising:

- pumping coolant through a cutting tool;
- engaging said cutting tool with a work-piece thereby creating resistance to the coolant flow;
- setting a target coolant pressure to be obtained between said cutting tool and said work-piece;
- measuring the coolant pressure supplied to said cutting tool;
- comparing the measured coolant pressure to the target coolant pressure;
- varying the flow rate of coolant pumped to minimize the difference between said target coolant pressure and said measured coolant pressure; and
- damping a noise signal generated during said pumping step.